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2003080-0144
(SK-1028-US)

In re Application No.
10/751,703

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

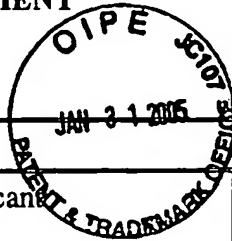
Applicant: Veach et al.,

Filing Date:
January 5, 2004

Group:

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U.S. PATENT DOCUMENTS



Examiner's Initials	U.S. Patent No.	Applicant	Issue Date	Class	Subclass
	6,242,452	Ogino et al.	June 5, 2001	514	258
	6,114,339	Gangjee	September 5, 2000	514	258
	5,977,163	Li et al.	November 2, 1999	514	449
	5,945,422	Doherty et al.	August 31, 1999	514	258
	5,733,914	Blankley et al.	March 31, 1998	514	258
	5,733,913	Blankley et al.	March 31, 1998	514	258
	5,620,981	Blankley et al.	April 15, 1997	514	258
	5,521,184	Zimmerman	May 28, 1996	514	252
	4,677,108	Kleinschroth et al.	June 30, 1987	514	258
	4,271,164	Blankley et al.	June 2, 1981	424	251
	4,252,946	Wood et al.	February 24, 1981	544	279
	4,113,859	Wood et al.	September 12, 1978	424	180
	3,639,401	Meyer et al.	February 1, 1972	260	256.4
	3,534,039	Davoll et al.	October 13, 1970	260	256.4

U.S. PATENT APPLICATIONS

Examiner's Initials:	Serial Number:	Applicant:	Filing Date:	Group:	Art Unit:
97	2002/0137756	Chen et al.	September 26, 2002		
h	2002/0055513	Arzeno et al.	May 9, 2002	514	258

FOREIGN PATENT DOCUMENTS

Examiner's Initials	Document No.	Country	Date	Translation	
				Yes	No
	EP 0 537 463	Europe	02 September 1992		
	WO 03/057165	International	17 July 2003		
	WO 02/18380	International	07 March 2002		
	WO 02/12238	International	14 February 2002		
	WO 01/44258	International	21 June 2001		
	WO 98/33798	International	06 August 1998		
	WO 96/34867	International	07 November 1996		

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INFORMATION DISCLOSURE STATEMENT

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Applicant: Veach et al.,

Filing Date:
January 5, 2004

Group:

~~1514~~ / 624

OTHER DOCUMENTS

Examiner's
Initials

Citation (Including Author, Title, Date, Pertinent Pages, Etc.)

Y

Allen, et al., "An Activating Mutation in the ATP Binding Site of the ABL Kinase Domain", *J. Biol. Chem.* 271: 19585-19591, 1996.

Azam, et al., "Mechanisms of Autoinhibition and STI-571/Imatinib Resistance Revealed by Mutagenesis of BCR-ABL", *Cell*, 112: 831-843, 2003.

Bai, et al., "Nucleophosmin-Anaplastic Lymphoma Kinase Associated with Anaplastic Large-Cell Lymphoma Activates the Phosphatidylinositol 3-Kinase/Akt Antiapoptotic Signaling Pathway", *Blood*, 96: 4319-4327, 2000.

Barker, et al., "Characterization of pp60^{c-src} Tyrosine Kinase Activities Using a Continuous Assay: Autoactivation of the Enzyme Is An Intermolecular Autophosphorylation Process", *Biochemistry*, 34: 14843-14851, 1995.

Beran, et al., "Selective Inhibition of Cell Proliferation and BCR-ABL Phosphorylation in Acute Lymphoblastic Leukemia Cells Expressing M_r 190,000 BCR-ABL Protein by a Tyrosine Kinase Inhibitor (CGP-57148)", *Clin. Cancer Res.* 4: 1661-1672, 1998.

Berge, et al., "Pharmaceuticals Salts" *Journal of Pharmaceutical Sciences*, 66: 1-19, 1977.

Branford, et al., "High Frequency of Point Mutations Clustered within the Adenosine Triphosphate-Binding Region of BCR/ABL in Patients with Chronic Myeloid Leukemia or Ph-Positive Acute Lymphoblastic Leukemia who Develop Imatinib (STI571) Resistance" *Blood*, 99: 3472-3475, 2002.

Boschelli, et al., "Synthesis and Tyrosine Kinase Inhibitory Activity of a Series of 2-Amino-8H-Pyrido[2,3-d]pyrimidines: Identification of Potent, Selective Platelet-Derived Growth Factor Receptor Tyrosine Kinase Inhibitors", *J. Med. Chem.* 41(22): 4365-4377, 1998.

Brunger, et al., "Crystallography & NMR System: A New Software Suite for Macromolecular Structure Determination", *Acta Crystallogr D. Biol. Crystallogr*, 54(Pt. 5): 905-921, 1998.

Buchdunger, et al., "Abl Protein-Tyrosine Kinase Inhibitor ST1571 Inhibits in Vitro Signal Transduction Mediated by c-Kit and Platelet-Derived Growth Factor Receptors", *J. Pharmacol. Exp. Ther.* 295: 139-145, 2000.

Buchdunger, et al., "Inhibition of the Abl Protein-Tyrosine Kinase in Vitro and in Vivo by a 2-Phenylaminopyrimidine Derivative" *Cancer Res.*, 56: 100-104, 1996.

Corbin, et al., "Analysis of the Structural Basis of Specificity of Inhibition of the Abl Kinase by STI571", *J. Biol. Chem.* 277: 32214-32219, 2002.

Daly, et al., "Induction of Chronic Myelogenous Leukemia in Mice by the P210^{bcr/abl} Gene of the Philadelphia Chromosome", *Science*, 247: 824-830, 1990.

Deininger, et al., "Direct Relation Between BCR-ABL Tyrosine Kinase Activity and Cyclin D2 Expression in Lymphoblasts", *Cancer Research*, 61: 8005-8013, 2001.

Dorsey, et al., "The Pyrido[2,3-d]pyrimidine Derivative PD180970 Inhibits p210Bcr-Abl

Tom Mc/gyi

10/19/05

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Applicant: Veach et al.,

Filing Date:
January 5, 2004

Group:
~~1614~~ / 62 Y

JTC	Tyrosine Kinase and Induces Apoptosis of K562 Leukemic Cells", <i>Cancer Res.</i> 60: 3127-3131, 2000.
	Druker, et al., "Effects of a Selective Inhibitor of the Abl Tyrosine Kinase on the Growth of Bcr-Abl Positive Cells", <i>Nat. Med.</i> 2: 561-566, 1996.
	Druker, et al., "Efficacy and Safety of a Specific Inhibitor of the BCR-ABL Tyrosine Kinase In Chronic Myeloid Leukemia" <i>N. Engl. J. Med.</i> , 344: 1031-1037, 2001.
	Druker, et al., "STI571: Targeting BCR-ABL as Therapy for CML", <i>Oncologist</i> , 6: 233-238, 2001.
	Druker, et al., "Activity of a Specific Inhibitor of the BCR-ABL Tyrosine Kinase in the Blast Crisis of Chronic Myeloid Leukemia and Acute Lymphoblastic Leukemia with the Philadelphia Chromosome", <i>N. Engl. J. Med.</i> , 344: 1038-1042, 2001.
	Faderl, et al., "The Biology of Chronic Myeloid Leukemia", <i>N. Engl. J. Med.</i> , 341: 164-172, 1999.
	Gorre, et al., "BCR-ABL Point Mutants Isolated from Patients with Imatinib Mesylate-Resistant Chronic Myeloid Leukemia Remain Sensitive to Inhibitors of the BCR-ABL Chaperone Heat Shock Protein 90", <i>Blood</i> , 100: 3041-3044, 2002.
	Hantschel, et al., "A Myristoyl/Phosphotyrosine Switch Regulates c-Abl", <i>Cell</i> , 112: 845-857, 2003.
	Hochhaus, et al., "Molecular and Chromosomal Mechanisms of Resistance to Imatinib (STI571) Therapy", <i>Leukemia</i> , 16: 2190-2196, 2002.
	Hofmann, et al., "Ph+ Acute Lymphoblastic Leukemia Resistant to the Tyrosine Kinase Inhibitor STI571 Has a Unique BCR-ABL Gene Mutation" <i>Blood</i> , 99: 1860-1862, 2002.
	Hubbard, et al., "Crystal Structure of the Tyrosine Kinase Domain of the Human Insulin Receptor", <i>Nature</i> , 372: 746-754, 1994.
	Jackson, et al., "N-Terminal Mutations Activate the Leukemogenic Potential of the Myristoylated Form of c-abl", <i>EMBO. J.</i> , 8: 449-456, 1989.
	Kantarjian, et al., "Hematologic and Cytogenetic Responses to Imatinib Mesylate in Chronic Myelogenous Leukemia", <i>N. Engl. J. Med.</i> , 346: 645-652, 2002.
	Klutcho, et al., "2-Substituted Aminopyrido[2,3-d]Pyrimidin-7 (8H)-Ones. Structure-Activity Relationships Against Selected Tyrosine Kinases and in Vitro and in Vivo Anticancer Activity", <i>J. Med. Chem.</i> , 41(17): 3276-3292, 1998.
	Kraker, et al., "Biochemical and Cellular Effects of c-Src Kinase-Selective Pyrido[2,3-d]Pyrimidine Tyrosine Kinase Inhibitors" <i>Biochem. Pharmacol.</i> 60: 885-898, 2000.
	La Rosee, et al., "Activity of the Bcr-Abl Kinase Inhibitor PD180970 Against Clinically Relevant Bcr-Abl Isoforms That Cause Resistance to Imatinib Mesylate (Gleevec, STI571)", <i>Cancer Res.</i> , 62: 7149-7153, 2002.
	Le Coutre, et al., "In Vivo Eradication of Human BCR/ABL-Positive Leukemia Cells with an ABL Kinase Inhibitor", <i>J. Natl Cancer Inst.</i> , 91: 163-168, 1999.

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INFORMATION DISCLOSURE STATEMENT


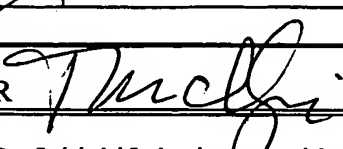
(Use several sheets if necessary)

Applicant: Veach et al.,

Filing Date:
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Group:
1614

✓	Lugo, et al., "Tyrosine Kinase Activity and Transformation Potency of <i>bcr-abl</i> Oncogene Products", <i>Science</i> , 247: 1079-1082, 1990.
	Manley, et al., "Molecular Interactions Between Gleevec TM and Mutant Forms of cAbl Kinase", <i>Proc. Am. Assoc. Cancer Res.</i> 4196: 2002.
	Moasser, et al., "Inhibition of Src Kinases by a Selective Tyrosine Kinase Inhibitor Causes Mitotic Arrest", <i>Cancer Res.</i> 59: 6145-6152, 1999.
	Mohammadi, et al., "Structures of the Tyrosine Kinase Domain of Fibroblast Growth Factor Receptor in Complex with Inhibitors", <i>Science</i> , 276: 955-960, 1997.
	Nagar, et al., "Crystal Structures of the Kinase Domain of c-Abl in Complex with the Small Molecule Inhibitors PD173955 and Imatinib (STI-571)", <i>Cancer Res.</i> , 62: 4236-4243, 2002.
	Nagar, et al., "Structural Basis for Autoinhibition of c-Abl Tyrosine Kinase", <i>Cell</i> , 112: 859-871, 2003.
	Navaza, "AMoRe: An Automated Package for Molecular Replacement", <i>Acta Crystallogr. A.</i> , 50: 157-163, 1994.
	Nowell, et al., "A Minute Chromosome in Human Chronic Granulocytic Leukemia", <i>Science</i> , 132: 1497-1501, 1960.
	Ottmann, et al., "A Phase 2 Study of Imatinib in Patients with Relapsed or Refractory Philadelphia Blood", 100: 1965-1971, 2002.
	Otwinowski, et al., "Processing of X-Ray Diffraction Data Collected in Oscillation Mode", <i>Methods in Enzymology</i> , 276: 307-326, 1997.
	Parada, et al., "BCR-ABL and Interleukin 3 Promote Haematopoietic Cell Proliferation and Survival Through Modulation of Cyclin D2 and p27 ^{Kip1} Expression", <i>J. Biol. Chem.</i> 276: 23572-23580, 2001.
	Pear, et al., "Efficient and Rapid Induction of a Chronic Myelogenous Leukemia-Like Myeloproliferative Disease in Mice Receiving P210 <i>bcr/abl</i> -Transduced Bone Marrow", <i>Blood</i> , 92: 3780-3792, 1998.
	Plattner, et al., "c-Abl is Activated by Growth Factors and Src Family Kinases and Has a Role in the Cellular Response to PDGF", <i>Genes Dev.</i> 13: 2400-2411, 1999.
	Roche-Lestienne, et al., "Several Types of Mutations of the <i>Abl</i> Gene Can be Found in Chronic Myeloid Leukemia Patients Resistant to STI571, and They Can Pre-Exist to the Onset of Treatment", <i>Blood</i> , 100: 1014-1018, 2002.
	Roumiantsev, et al., "Clinical Resistance to the Kinase Inhibitor STI-571 in Chronic Myeloid Leukemia by Mutation of Tyr-253 in the Abl Kinase Domain P-loop", <i>Proc. Natl Acad. Sci. USA</i> , 99: 10700-10705, 2002.
	Rowley, et al., "A New Consistent Chromosomal Abnormality in Chronic Myelogenous Leukaemia Identified by Quinacrine Fluorescence and Giemsa Staining", <i>Nature</i> , 243: 290-293, 1973.
	Sawyers, C., "Chronic Myeloid Leukemia", <i>N. Engl. J. Med.</i> , 340: 1330-1340, 1999.

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	Sawyers, et al., "Imatinib Induces Hematologic and Cytogenetic Responses in Patients with Chronic Myelogenous Leukemia in Myeloid Blast Crisis: Results of a Phase II Study", <i>Blood</i> , 99: 3530-3539, 2002.						
	Schindler, et al., "Structural Mechanism for STI-571 Inhibition of Abelson Tyrosine Kinase", <i>Science</i> , 289: 1938-1942, 2000.						
	Shah, et al., "Multiple BCR-ABL Kinase Domain Mutations Confer Polyclonal Resistance to the Tyrosine Kinase Inhibitor Imatinib (ST1571) in Chronic Phase and Blast Crisis Chronic Myeloid Leukemia", <i>Cancer Cell</i> , 2: 117-125, 2002.						
	Talpaz, et al., "Imatinib Induces Durable Hematologic and Cytogenetic Responses in Patients with Accelerated Phase Chronic Myeloid Leukemia: Results of a Phase 2 Study", <i>Blood</i> , 99: 1928-1937, 2002.						
	Trumpp-Kallmeyer, et al., "Development of a Binding Model to Protein Tyrosine Kinases for Substituted Pyrido[2,3-d]Pyrimidine Inhibitors", <i>J. Med. Chem.</i> 41: 1752-1763, 1998.						
	Van Etten, "Cycling, Stressed-Out and Nervous: Cellular Functions of c-Abl", <i>Trends Cell Biol.</i> , 9: 179-186, 1999.						
	Von Bubnoff, et al., "BCR-ABL Gene Mutations in Relation to Clinical Resistance of Philadelphia-Chromosome-Positive Leukaemia to ST1571: a Prospective Study", <i>Lancet</i> , 359: 487-491, 2002.						
	Warmuth, et al., "The Src Family Kinase Hck Interacts with Bcr-Abl by a Kinase-Independent Mechanism and Phosphorylates the Grb2-Binding Site of Bcr", <i>J. Biol. Chem.</i> 272: 33260-33270, 1997.						
	Wisniewski, et al., "Characterization of Potent Inhibitors of the Bcr-Abl and the c-Kit Receptor Tyrosine Kinases", <i>Cancer Res.</i> 62: 4244-4255, 2002..						
	Wolff, et al., "Establishment of a Murine Model for Therapy-Treated Chronic Myelogenous Leukemia Using the Tyrosine Kinase Inhibitor ST1571", <i>Blood</i> , 98: 2808-2816, 2001.						
	Yamaguchi, et al., "Structural Basis for Activation of Human Lymphocyte Kinase Lck Upon Tyrosine Phosphorylation", <i>Nature</i> , 384: 484-489, 1996.						
	Zheng, et al., "Crystal Structure of the Catalytic Subunit of cAMP-Dependent Protein Kinase Complexed with MgATP and Peptide Inhibitor", <i>Biochemistry</i> , 32: 2154-2161, 1993.						
	Zimmerman, et al., "Potent and Selective Inhibitors of the ABL-Kinase: Phenylamino-Pyrimidine (PAP) Derivatives" <i>Bioorg. Med. Chem. Lett</i> , 7: 187-192, 1997.						
International Search Report issued for corresponding PCT application PCT/US2004/000116.							
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